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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	1-25111
First Inventor	Yuhong Zheng et al.
Title	BOUNDARY AUTO-CALIBRATION SCHEME ETC.
Express Mail Label	EV 399902491 US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **40**]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **10**]
5. Oath or Declaration [Total Pages **2**]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application No.: **PCT/US02/30962**

Prior application information:


Examiner

Group / Art Unit:

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**
☒ Customer Number: **04859** or ☐ Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone	Fax	

Name (Print/Type)	Shital A. Shah	Registration No. (Attorney/Agent)	47,073
Signature		Date	March 18, 2004

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

16085 U.S. PTO  
031804

22857 U.S. PTO  
10/803343

031804

# DUPLICATE

TO/SB/17 (10-03)  
Approved for use through 07/31/2006. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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## FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) \$828.00

### Complete if Known

Application Number  
Filing Date Herewith  
First Named Inventor Yuhong Zheng et al.  
Examiner Name  
Art Unit  
Attorney Docket No. 1-25111

### METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number MacMillan, Sobanski & Todd LLC

Deposit Account Name 11-0417

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

### FEE CALCULATION

#### 1. BASIC FILING FEE

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	2001	770	385	Utility filing fee	770.00
1002	2002	340	170	Design filing fee	
1003	2003	530	265	Plant filing fee	
1004	2004	770	385	Reissue filing fee	
1005	2005	160	80	Provisional filing fee	
SUBTOTAL (1)					(\$)

#### 2. EXTRA CLAIM FEES FOR UTILITY AND

Extra Claims	Fee from below	Fee Paid
Total Claims 21 - 20** = 1 X 18.00 = 18.00		
Independent Claims 3 - 3** = 0 X 86.00 = 0.00		
Multiple Dependent		

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Description	Fee Paid
1202	2202	18	9	Claims in excess of 20	
1201	2201	86	43	Independent claims in excess of 3	
1203	2203	290	145	Multiple dependent claim, if not paid	
1204	2204	86	43	** Reissue independent claims over original patent	
1205	2205	18	9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					(\$)

\*\*or number previously paid, if greater; For Reissues, see above

### FEE CALCULATION (continued)

#### 3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	2051	130	65	Surcharge - late filing fee or oath	
1052	2052	50	25	Surcharge - late provisional filing fee or cover sheet	
1053	1053	130	130	Non - English specification	
1812	1812	2,520	2,520	For filing a request for ex parte reexamination	
1804	1804	920*	920*	Requesting publication of SIR prior to Examiner action	
1805	1805	1,840*	1,840*	Requesting publication of SIR after Examiner action	
1251	2251	110	55	Extension for reply within first month	
1252	2252	420	210	Extension for reply within second month	
1253	2253	950	475	Extension for reply within third month	
1254	2254	1,480	740	Extension for reply within fourth month	
1255	2255	2,010	1,005	Extension for reply within fifth month	
1401	2401	330	165	Notice of Appeal	
1402	2402	330	165	Filing a brief in support of an appeal	
1403	2403	290	145	Request for oral hearing	
1451	1451	1,510	1,510	Petition to institute a public use proceeding	
1452	2452	110	55	Petition to revive - unavoidable	
1453	2453	1,330	665	Petition to revive - unintentional	
1501	2501	1,330	665	Utility issue fee (or reissue)	
1502	2502	480	240	Design issue fee	
1503	2503	640	320	Plant issue fee	
1460	1460	130	130	Petitions to the Commissioner	
1807	1807	50	50	Processing fee under 37 CFR § 1.17(q)	
1806	1806	180	180	Submission of Information Disclosure Statement	
8021	8021	40	40	Recording each patent assignment per property (times number of properties)	40.00
1809	2809	770	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	2810	770	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	2801	770	385	Request for Continued Examination (RCE)	
1802	900	900	900	Request for expedited examination of a design application	
Other fee (specify)					

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) \$40.00

### SUBMITTED BY

Name (Print/Type) Shital A. Shah  
Signature

Registration No. (Attorney/Agent) 47,073

### Complete (if applicable)

Telephone (419) 255-5900  
Date March 18, 2004

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**

Applicant(s): Yuhong Zheng et al.

Docket No.

1-25111

Serial No.

Filing Date  
Herewith

Examiner

Group Art Unit

Invention:

**BOUNDARY AUTO-CALIBRATION SCHEME FOR PROPORTIONAL  
POPPET VALVE PRESSURE CONTROL**

I hereby certify that the following correspondence:

**Utility Patent Application which includes a 40 page Specification, 10 sheets of Drawings, Executed  
Declaration and Assignment, an Information Disclosure Statement and a Return Postcard***(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37  
CFR 1.10 in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

March 18, 2004.*(Date)*Toni Bosch*(Typed or Printed Name of Person Mailing Correspondence)*Toni Bosch*(Signature of Person Mailing Correspondence)*EV 399902491 US*("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**